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ARSPACE: The way we were

By E. Paul Semmens, COL U.S. Army (Retired)

In June, 1994 I had the privilege of taking “command” of the U.S. Army Space Command (ARSPACE). I had been the Assistant Deputy Chief of Staff for Operations at U.S. Army Europe and had been involved in 18 deployments, including Somalia, during that time. When I arrived in Colorado Springs, Colo., I was focused on the operational command, one that had a deployment mindset and needed great organizational flexibility to accomplish the mission.

I was soon humbled to learn that I was not the commander of Army Space Command - that title belonged to the Commanding General of SMDC, LTG Donald Lionetti and later LTG Jay Garner. I was intent on carving out ARSPACE's role as the Army's Space warfighter so I convinced LTG Garner to allow ARSPACE elements in Colorado Springs to be called ARSPACE (Forward). This identified us as the combat element of SMDC.

ARSPACE was organized with dual deputies when I arrived, one for support and one for operations. I argued to reorganize the staff into a standard G-Staff organization, to facilitate the ARSPACE interaction with outside agencies — especially Army ones. The command is still organized that way today.

The ARSPACE commander position was an Air Defense Artillery (ADA) position, and the second surprise I experienced was that the ranking officers in the command were anything but ADA. COL Bill Hoyman became the Chief of Staff and he was a dyed-in-the-wool Infantryman. COL Jim Kulbacki was the G-3 and a signal officer. Having a signal officer as the operations officer turned out to be a blessing as communications was the key that held all our Space activities together. Kulbacki was a great Space operations guy and educated me on the complex link between Space and communications. I relied on Hoyman as an invaluable source of experience and advice - he ran the command like a Swiss watch.

The key to ARSPACE's success was a group of incredibly dedicated Army civilians, many of whom had been with the command since its inception. The house keeping divisions — Logistics (Allison Chard), Contracting (Darryl Nottingham), Personnel (Don Mathis), Resource Management (Tom Callaghan), and Facility Engineering (Hugh Mason) were all superb. They insured the government got the most for their dollar. We instituted several processes to help prioritize and track money expenditures, but the bottom line was that the ARSPACE staff was second-to-none in its professional expertise and

collective dedication to insuring the “command” prospered.

I believed the key to our success was supporting the warfighter and insuring everyone we dealt with understood plainly that we were an ARMY organization. This philosophy caused some interesting decisions. For example, during my tenure at ARSPACE, Hugh Mason was already designing a new headquarters building for the command. The plan was to put the building on Peterson Air Force Base. GEN Dennis Reimer, the Chief of Staff of the Army, visited one day and when we briefed him on the proposed construction, we were vague about where the facility would be located. Reimer gently suggested Fort Carson and I immediately agreed. Having ARSPACE at Carson was operationally inefficient, but in terms of saying to the world that we were ARMY Space it made sense. Obviously this didn't happen, but my goal was to convince the community that Space was not just a place, but also a battlefield operating system for the Army.

Like a used car salesman, my first task was to survey what capabilities we had on the lot to bring to the warfighter. The command had already established Army Space Support Teams (ARSSTs) that had supported theater commanders in several exercises and contingencies with satellite communications, weather and mapping support. The problem was that we just didn't have enough teams - in order to be successful. The teams had to establish a habitual relationship with the commands they supported. We needed a dedicated team for European Command (EUCOM), Central Command (CENTCOM), Pacific Command (PACOM) and the XVIII Airborne Corps (the first unit deployed in any contingency). We immediately began the process of getting the authorizations to field more teams. I didn't know where we were headed organizationally then, but we talked a lot about a Space battalion of some sort to command and control all these Space capabilities that I envisioned coming on line.

The ARSSTs were real success stories and the ingenuity that the team commanders displayed was outstanding. MAJ Kirk Foeller was our XVIII Corps team chief and his team devised a way to use a NASA (National Aeronautics and Space Administration) satellite to support an operation in Haiti. The satellite provided a video-teleconference capability that was used for operational updates several times a day, and when it was not needed for that purpose, it was used to let families talk to one another. People got married over this link, saw their children for the first time and were able to assure loved ones at

home that they were okay.

During the same operation, we had a couple of Special Forces Soldiers operating near Cap Haitian who got injured and one of the injuries was life threatening. The Corps weather officer in Port Au Prince said the weather was too rough to send in a MEDEVAC. Our ARSST pulled out their weather maps and showed the helicopters a way around the storms. The MEDEVAC went in and a man's life was saved. The reason for our success in this operation was because our weather updates came from National Oceanographic and Atmospheric Administration satellites, which were updated every 30 minutes as opposed to the four-hour span between the standard military satellite updates.

Digital maps provided by the teams gave commanders a good appreciation for the terrain they would be going into. When the XVIII Airborne Corps went into Port Au Prince, they had no idea what to expect. The ARSST was able to provide the Corps commander with maps and a 3-D flythrough. He could view the battlefield from the airfield out toward Port Au Prince and looking in from the enemy perspective. Eventually ARSST became THE conduit for commanders to get exceptional satellite imagery before and during an operation or exercise.

My goal was to make the ARSSTs more and more capable by providing them with a continuous stream of new Space products. The command had a program called the Army Space Exploitation and Demonstration Program (ASEDP) that had to be the most unique acquisition program in the Army. Every year, Craig Baker published a sort of requirements document stating the command was interested in new Space capabilities in given areas. Contractors would come in and brief the team and if they had a product that met a requirement and was in the prototype stage, we provided it to the ARSSTs. Many products were still premature, so we established a system by which promising technologies were funded with a delivery date a year out. Not all the new products turned out to be as useful or mature as we wanted, but the ASEDP program allowed us to get the latest and greatest Space technology into warfighter's hands as quickly as possible. Many of these Space products underwent their operational tests in combat.

I always wished that someone would commission a painting of an ARSST Soldier. My vision is he or she would be sitting at a field table, with a rucksack on the ground, working on a laptop computer.

We kept building our capabilities by reorganizing existing capabilities into standard Army organizations. The DSCS (Defense Satellite Communications System) satellite stations became companies and LTC Lynn Weber took command of the provisional battalion. The JTAGS ground stations were organized as detachments - commanded and manned jointly by the Navy and the Army.

During my tenure, the biggest challenge for the command was to build the Theater Missile Defense Tactical Operations Center, the Army's first all digital command and con-

trol center.

LTG Garner came out to Colorado Springs for some briefings in October 1994. He was convinced that the evolving threat demanded a missile defense TOC that would include all four pillars of missile defense. I told him I could do the requirements but that I had no one who could bend metal. He said that COL Dan Montgomery would build it for the command in Huntsville, Ala. The first meeting with COL Montgomery in Huntsville determined that we were not exactly sure what the TOC should be capable of. The capabilities and requirements were still evolving. COL Montgomery was the Program Manager for Army TOCs, so he had access to all the Army command and control systems. Armed with a list of those systems, I returned to Colorado Springs to design a TOC that would provide synergy to the tactical ballistic missile fight.

I saw the TOC as a multi-tiered Space capability to support a theater commander in time of crisis. The TOC was an integrating center for all our Space capabilities--DSCS, JTAGS and the Space products in an ARSST focused on killing enemy tactical ballistic missiles. When we displayed the TOC at the AUSA (Association of the United States Army) conference in Washington D.C. in 1995, the first thing a visitor stumbled across was an ARSST. The TOC was a deployable, Space maximizing capability and could be tailored to the mission needs.

LTC Emmanuel "Skip" Tornquist, CWO Owen Carleton and COL Mike Penhallegon were invaluable in refining the TOC requirements. They developed an Intelligence Preparation of the Battlefield methodology for TBM hunting. We then began identifying how to link the existing command and control systems - Air Defense Artillery, Intelligence, Air Space Control and Field Artillery into a coherent process to integrate the pillars of Air Defense to negate enemy effectiveness.

In the end, Montgomery mounted each of the operating systems in a separate HUMVEE. All the systems were interfaced to a battle captain's position, where the TOC officer in charge could view any of the situational displays simply by pushing a button and talk to any or all of the TOC operators via an intercom system. Dave Morton, a contractor, wired the system capabilities together and devised a way to get training simulations into the network.

We got our mission in October 1994 and on Feb. 10, 1995, we rolled our TOC out on the South lawn of the Pentagon. Because the TOC was digital we had no paper maps and that caused some interesting reactions from senior Army leaders.

During our time at the Pentagon, we had about 120 general officers and dignitaries, including the Army Acquisition Executive (AAE) come through the TOC. We would give the VIPs a short orientation on the TOC and then conduct a simulated battle. The environment was so real that the visitors really got into the action. When I was briefing the AAE, we



Above: A deployable Joint Tactical Ground Station element arrives in Holland for OPERATION JOINT PROJECT OPTIC WINDMILL in 1998. Inset: The Force Projection Tactical Operations Center set up and operating during EXERCISE PRAIRIE WARRIOR at Fort Leavenworth, Kansas, in 1996. Photos by Ed White

found a potential Scud launch point, but imagery had not confirmed the target. While I was waiting for an Unmanned Aerial Vehicle to send us back pictures of the site, the AAE started bouncing in his chair and enthusiastically yelled, “Kill it, Kill it”.

It was always fun to watch the Army Generals when they visited, because they would look uncomfortable almost immediately upon entering the TOC. I’d ask them if something was bothering them — it was always the fact there are no maps. We introduced the leadership to a different mentality — digital maps. I think that is one of the TOC’s biggest legacies. We helped move the U.S. Army toward thinking digitally. The PM TOC still briefs the Army’s Theater Missile Defense TOC as the Army’s first digital TOC.

The following May, we deployed the TOC to Exercise Roving Sands and surprised everyone with our ability to identify TBM sites and attack them. The TOC had a Multiple Launch Rocket System (MLRS) battery operation control to it, dedicated to firing upon enemy TBM sites. During this exercise, the Third Army commander, came into the TOC late one night and explained that his people had discovered an enemy ammunition supply point but he didn’t think he had time to bring fire on it before it moved using the standard field artillery fire control processes. He asked if we could shoot it and I said yes as soon as we got the coordinates. Two minutes after getting the coordinates we fired on the target and destroyed it. Mission accomplished.

The real value of the TOC was emphasized when we deployed it to CENTCOM in early 1995. GEN Bennie Peay was the CENTCOM commander and we gave him a briefing and a demonstration of the TOCs capabilities. Peay was very concerned about the capability to prosecute the battle at the CINC level and bypass subordinate commanders. The cradle to grave decision-making cycle was extremely short in the TOC.

The TOC also became a valuable test bed for a lot of program managers. We were able to introduce the ASEDP Command and

Control program. This allowed us to get a steady stream of new equipment to test. Since the TOC encompassed all four pillars of Theater Missile Defense, we kept apprised of developmental activities all the time.

The success of the TOC was ultimately measured by its reassignment to the 32nd Air and Missile Defense Command at Fort Bliss, Texas.

The evolution from ARSPACE to SMDC/ARSTRAT continues the legacy of operationalizing Army Space. When the Space Brigade formed up, I felt very proud because the idea had started a decade earlier. It is the natural evolution of the programs the great Soldiers and civilians of ARSPACE executed so flawlessly.

I always argued for a general officer in Colorado Springs and so I was very happy when the first one was assigned. I think this is one of the best things that happened in the Space operations arena. I attended many meetings with Ashe, the Commander in Chief, Space, where I was the only colonel in the room with a group of General Officers.

That’s one old Soldier’s recollections of ARSPACE in the mid-1990’s. It was a hectic time but an incredible group of Army Soldiers and civilians moved Space forward in the Army’s consciousness. I will always be appreciative of their professionalism and dedication. Without the pro-active leadership of Generals Lionetti and Garner, nothing would have been accomplished. The command attacked every mission it was assigned and went looking for more. We were Soldiers and just tried to prove to the Army that Space was our weapon. The great work being done by SMDC/ARSTRAT and the Joint Functional Component Command-Integrated Missile Defense today confirms that the command now occupies “the ultimate high ground” — Space.